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A systematic study on the genus *Pseudacroclita* Oku (Lepidoptera: Tortricidae: Olethreutinae)

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Abstract: This paper deals with four species of the genus *Pseudacroclita* Oku, including two new species, *i*. *e*. *Pseudacroclita projecta* sp. nov. and *Pseudacroclita micrancistra* sp. nov., and one newly recorded species, *Pseudacroclita luteispecula* (Kuznetsov), from China. The adult photographs and genitalia figures of all the species are provided, and a key to the species is given.

Key words: Lepidoptera; Tortricidae; Olethreutinae; *Pseudacroclita*; new species; new record

The genus *Pseudacroclita* was erected by Oku (1979) for *Acroclita hapalaspis* Meyrick. Kuznetsov (2001) proposed a new combination, *Pseudacroclita luteispecula* (Kuznetsov). Up to date, only two species of *Pseudacroclita* have been reported, which are distributed in China, Japan and Russia (Kawabe *et al*., 1992; Razowski, 1999; Kuznetsov, 2001). In the present paper two new species are described and *P*. *luteispecula* (Kuznetsov) is firstly recorded in China. The type specimens are deposited in the Department of Biology, Nankai University, Tianjin, China.

Pseudacroclita Oku, 1979

Pseudacroclita Oku, 1979, Kontyû, 47 (4): 591.

Type species: *Acroclita hapalaspis* Meyrick, 1931.

Generic characters: Forewing with R_4 and R_5 long stalked; trace of M-stem reaching mid-distance between M_2 and M_3; CuA_1 closely approximated to M_3 basally; CuP vestigial. Hindwing with Rs and M_1 closely approximated toward base; M_3 and CuA_1 stalked.

Male genitalia: Uncus ill-defined; socius broad. Valva with neck distinct; sacculus angle prominent; cucullus varied in shaped. Aedeagus broad.

Female genitalia: Sterigma varied in shape; colliculum present. Signa horn-like or spine-like.

Remarks: This genus is related to *Ancylis* Hübner (Oku, 1979; Razowski, 1989), but can be distinguished by stalked R_4 and R_5 in the forewing, wide aedeagus in the male and spinuous signa in the female; while in *Ancylis*, R_4 and R_5 are separated, aedeagus is thinner and signa are flattened. The genus is also similar to *Gypsonoma* Meyrick in the structure of socius, but mainly differs from the latter in R_4 and R_5 stalked. Razowski (1989) redescribed this genus and indicated that the sterigma in the female was cup-shaped. But in the present study sterigma is found to be varied in shape. In addition, cucullus varies in shape, oblong, oval or triangular.

The genus *Pseudacroclita* is geographically distributed in China, Japan and Russia. The food plants include *Rubus* spp. (Rosaceae) and *Plectranthus glaucocalyx* (Lemiaceae) (Oku, 1979; Kuznetsov, 2001).

Key to the species of *Pseudacroclita* based on male genitalia

1. Valva with a short process near middle of costa; cucullus oblong ······ ······ *P*. *projecta* sp. nov.
   Valva without process near middle of costa; cucullus triangular or oval
2. End of socius forming hook-like process on inner side ······ ······ *P*. *micrancistra* sp. nov.
   End of socius without hook-like process on inner side ······ 3
3. Neck of valva long; cucullus oval, rounded dorsally ······ ······ *P*. *luteispecula* (Kuznetsov)
   Neck of valva short; cucullus somewhat triangular, right-angled dorsally ······ *P*. *hapalaspis* (Meyrick)

1 *Pseudacroclita projecta* Zhang *et* Li, sp. nov. (Figs. 1, 3)

Adult (Fig. 1): Wingspan 11.5 mm. Head and antenna brown. Labial palpus brown, terminal segment minute. Thorax and tegula brown. Forewing with ground color dark brown; apex slightly protrudent; termen slightly concave, brown; costa with three pairs of grey strigulae from apex to costal 2/5; ocellar patch white, irregularly triangular; cilia yellow. Hindwing and cilia grey. Legs grey, with brown scales on tibiae and tarsi.

Male genitalia (Fig. 3): Uncus rudimentary; socius large, somewhat triangular, with very long hairs. Valva long and narrow, with distinct neck; costa gently arched and nearly parallel with ventral margin, a short hairy process set near middle; sacculus angle slightly

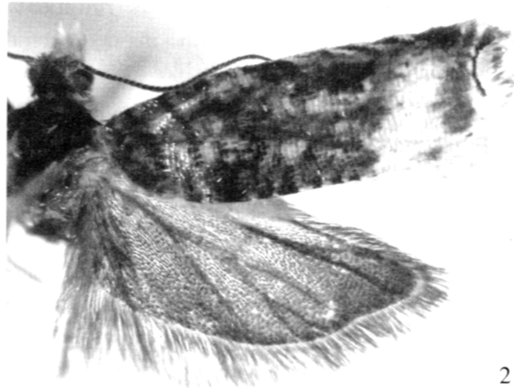
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Figs. 1 – 2 Adults of *Pseudacroclita* spp.
1. *Pseudacroclita projecta* sp. nov., ♂; 2. *Pseudacroclita micrancistra* sp. nov., ♂

broad, protrudent, setose; cucullus oblong, setose. Aedeagus broad; cornuti numerous, spiculate.

Female: Unknown.

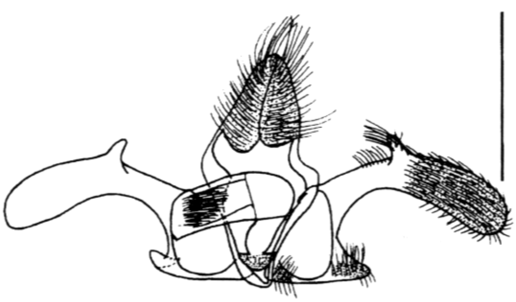
Holotype ♂, China: Jiangkou County (27°41′N, 108°50′E), Guizhou Province, alt. 1 700 m, 29. Ⅶ. 2001, leg. LI Hou-Hun and WANG Xin-Pu, genital slide no. ZAH03387.

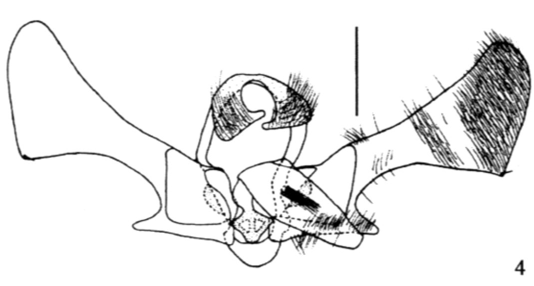
Diagnosis: This species can be distinguished from any other known species of *Pseudacroclita* by costa with a short process and cucullus oblong instead of triangular or oval in the male genitalia.

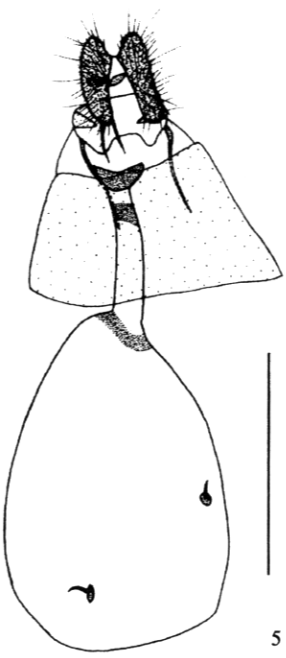
Etymology: The specific name is derived from the Latin "*projectus*" = projecting, indicating costa with a short process in the male genitalia.

2 *Pseudacroclita micrancistra* Zhang *et* Li, sp. nov. (Figs. 2, 4, 5)

Adult (Fig. 2): Wingspan 12.0 – 13.0 mm. Vertex with light brown scales, frons grey. Antenna brown. Labial palpus grey mixed with brown, terminal segment slender. Thorax and tegula greyish brown. Forewing with ground color brown, scattered with some lighter streaks; apex fulvous and falcate; termen concave, brown; costa with three pairs of grey strigulae from apex to half; ocellar patch white, irregularly rectangular, with leaden scales on its outer side; cilia grey. Hindwing and cilia grey. Legs grey, with brown scales on tibiae and tarsi.


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Figs. 3 – 5 Genitalia of *Pseudacroclita* spp.
3. *Pseudacroclita projecta* sp. nov., ♂; 4 – 5. *Pseudacroclita micrancistra* sp. nov.: 4. ♂; 5. ♀ (scales: 3 = 0.5 mm, 4 = 0.3 mm, 5 = 1.0 mm)

Male genitalia (Fig. 4): Uncus rudimentary; socius short, hairy, its end with inside extending inward, somewhat forming a hook-like process. Valva with distinct neck; costa almost straight, sacculus angle narrow, protrudent, setose; cucullus large triangular, hairy, with a thin spine on ventral angle. Aedeagus broad; cornuti numerous, spiculate.

Female genitalia (Fig. 5): Papilla analis broad and short, hairy; posterior apophysis slightly shorter than anterior apophysis. Sterigma somewhat cymbate in shape. Ductus bursae thin; colliculum short, near end. Corpus bursae pyriform, much longer than ductus bursae, with a sclerotized ring at its entrance; two small spine-like signa present.

Holotype ♂, China: Mt. Fanjing (27°55′N, 108°41′E), Guizhou Province, alt. 1 390 m, 28. Ⅴ. 2002, leg. WANG Xin-Pu, genitalia slide no. ZAH03747. Paratypes: 2 ♂♂, same data as holotype; 8 ♂♂, 4 ♀♀, China: Daozhen County, Guizhou Province, 1 350 – 1 450 m, 22 – 25. Ⅴ. 2004, leg. HAO Shu-Lian.

Diagnosis: This species is similar to *Pseudacroclita hapalaspis* (Meyrick), but can be separated by end of socius with a hook-like process on inner side and cucullus big triangular in the male genitalia; sterigma somewhat boat-shaped, corpus bursae much longer than ductus bursae, signa small and spined in the female genitalia. While in the latter species, end of socius without hook-like process, cucullus small triangular and right-angled dorsally; sterigma cup-shaped, corpus bursae slightly longer than ductus bursae, signa long and horned.

Etymology: The specific name is derived from the Latin "*micrancistrus*" = of small hook, referring to the end of socius with a small hook-like process on inner side.

3 *Pseudacroclita hapalaspis* (Meyrick, 1931) (Figs. 6, 8, 10)

Acroclita hapalaspis Meyrick, 1931, *Exotic Microlepid.*, 4: 144; Issiki, 1957, *Icon. Heteroc. Jap. Color.*, 1: 66.

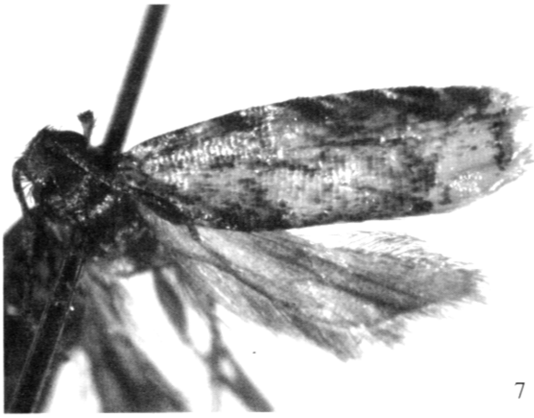
Olethreutes hapalaspis (Meyrick, 1931), Clarke, 1958, *Catalogue of the Type Specimens of Microlepidoptera in the British Museum (Natural History) described by Edward Meyrick*, 3: 515.

Pseudacroclita hapalaspis (Meyrick, 1931), Oku, 1979, *Kontyû*, 47 (4): 592; Kawabe, 1982, in: Inoue *et al.* (eds.), Moths of Japan, 2: 120; Kawabe, 1989, *Microlepidoptera of Thailand*, 2: 51; Razowski, 1989, *Acta zool. cracov.*, 32 (7): 187; Razowski, 1999, *SHILAP Revta. lepid.*, 27 (108): 490; Kuznetsov, 2001, in: Ler (ed.), Key to the Insects of Russian Far East, 5(3): 299.

Wingspan 9.0 – 11.0 mm.

Specimens examined: 1 ♀, China: Hefeng County, Hubei Province, alt. 1 260 m, 17. Ⅶ. 1999, leg. LI Hou-Hun *et al.*; 1 ♂, 1 ♀, China: Dehua County, Fujian Province, alt. 850 m, 15. Ⅸ. 2002, leg. WANG Xin-Pu; 1 ♂, China: Zhangjiajie, Hunan Province, alt. 650 m, 10. Ⅷ. 2001, leg. LI Hou-Hun and WANG Xin-Pu; 1 ♂, China: Heshan, Guangdong Province, 20. Ⅸ. 2002, leg. LIU Gui-Lin and ZHANG Bing-Lan; 1 ♂, China: Chishui, Guizhou Province, alt. 390 m, 28. Ⅴ. 2000, leg. DU Yan-Li; 1 ♀, China: Mt. Fanjing, Guizhou Province, alt. 530 m, 2. Ⅵ. 2002, leg. WANG Xin-Pu; 2 ♂♂, China: Mt. Fanjing, Guizhou Province, alt. 600 m, 28. Ⅴ. 2001, leg. LI Hou-Hun and WANG Xin-Pu.


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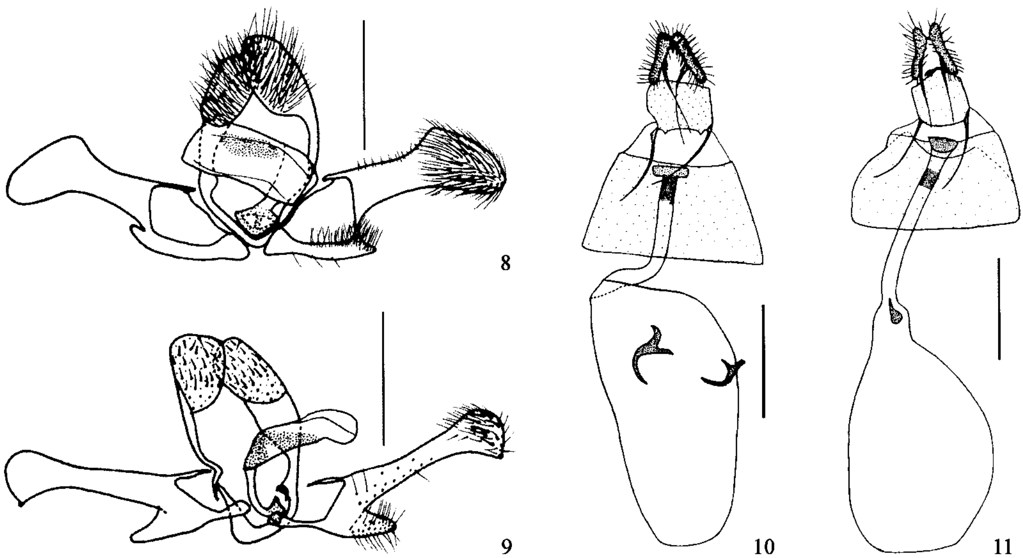

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Figs. 6 – 7 Adults of *Pseudacroclita* spp.
6. *Pseudacroclita hapalaspis* (Meyrick), ♂; 7. *Pseudacroclita luteispecula* (Kuznetsov), ♂

Food plants: *Rubus siiboldii*, *R. buergeri*, *R. crataegifolius* and *R. palnatus* var. *coptophyllus* (Rosaceae) (Oku, 1979).

Distribution: China (Fujian, Hubei, Hunan, Guangdong, Guizhou, Taiwan), Japan.

Remarks: It can be distinguished by cucullus somewhat triangular, small, and right-angled dorsally in the male genitalia and, signa horned in the female genitalia. Razowski (1989) indicated sterigma cup-shaped, while in our study it is somewhat different from



Figs. 8–11 Genitalia of *Pseudacroclita* spp.
8, 10. *Pseudacroclita hapalaspis* (Meyrick); 9, 11. *Pseudacroclita luteispecula* (Kuznetsov).
8, 9. ♂; 10, 11. ♀ (scales: 8, 9 = 0.3 mm; 10, 11 = 0.5 mm).

his description.

4 *Pseudacroclita luteispecula* (Kuznetsov, 1979) (Figs. 7, 9, 11) New Record for China

Enarmonodes luteispecula Kuznetsov, 1979, Trudy Zoologicheskogo Instituta, 81: 77.

Pseudacroclita luteispecula (Kuznetsov, 1979), Kuznetsov, 2001, in: Ler (ed.), Key to the Insects of Russian Far East, 5 (3): 299.

Wingspan 9.0 mm.

Specimens examined: 1 ♂, China: Tongbai County, Henan Province, alt. 300 m, 11. Ⅸ. 2000, leg. LI Hou-Hun; 1 ♀, China: Mt. Song, Dengfeng County, Henan Province, alt. 800 m, 9. Ⅵ. 2000, leg. YU Hai-Li; 2 ♂♂, China: Zhangjiajie, Hunan Province, alt. 650 m, 7. Ⅷ. 2001, leg. LI Hou-Hun and WANG Xin-Pu.

Food plant: *Plectranthus glaucocalyx* (Lemiaceae) (Kuznetsov, 2001).

Distribution: China (Henan, Hunan), Russia.

Remarks: This species can be separated by slender neck of valva, somewhat oval cucullus in the male genitalia and one pear-shaped or elliptic signum in the female genitalia.

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拟顶小卷蛾属分类研究
(鳞翅目:卷蛾科:新小卷蛾亚科)

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摘要:本文系统研究了拟顶小卷蛾属 *Pseudacroclita* Oku,共记述 4 种,除已知种拟顶小卷蛾 *P. hapalaspis* (Meyrick)外,还有 2 个新种(突拟顶小卷蛾 *P. projecta* sp. nov. 和钩拟顶小卷蛾 *P. micrancistra* sp. nov.)及 1 中国新记录种[黄斑拟顶小卷蛾 *P. luteispecula* (Kuznetsov)]。提供了 4 个种的成虫照片和外生殖器特征图,给出了该属已知种的分种检索表。新种的模式标本保存在南开大学生物系。

关键词:鳞翅目;卷蛾科;新小卷蛾亚科;拟顶小卷蛾属;新种;新记录种
中图分类号:Q969 **文献标识码**:A **文章编号**:0454-6296(2005)03-0396-05

新种简述

突拟顶小卷蛾,新种 *Pseudacroclita projecta* Zhang *et* Li, sp. nov.

翅展 11.5 mm。

正模♂,贵州江口(27°41′N,108°50′E)回香坪,海拔 1 700 m, 2001. Ⅶ. 29,李后魂,王新谱采,玻片号 ZAH03387。新种与本属其他种可通过以下特征区别:雄性外生殖器抱器背近中部具一短的突起,抱器端长方形。而其他种的抱器背近中部无突起,抱器端三角形或卵形。

钩拟顶小卷蛾,新种 *Pseudacroclita micrancistra* Zhang *et* Li, sp. nov.

翅展 12.0~13.0 mm。正模♂,贵州梵净山(27°55′N,108°41′E)护国寺,海拔 1 390 m,2002. Ⅴ. 28,王新谱采,玻片号 ZAH03747。副模:2♂♂,采集资料同正模;8♂♂,4♀♀,贵州道真大沙河,海拔 1 350~1 450 m, 2004. Ⅴ. 22~25,郝淑莲采。

新种与拟顶小卷蛾 *P. hapalaspis* (Meyrick)相似,但可以通过以下特征区别:雄性外生殖器尾突末端内弯形成钩状突起,抱器端大三角形;雌性外生殖器阴片舟形,交配囊远长于囊导管,囊突小,刺状。后者雄性外生殖器尾突末端无钩状突起,抱器端小,背角近直角;雌性外生殖器阴片杯形,交配囊略长于囊导管,囊突长角状。